



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,245	11/14/2001	Emmanuel Dotaro	Q67154	6834

7590 10/04/2004
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
Suite 800
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2633

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,245

Applicant(s)

DOTARO ET AL.

Examiner

Hanh Phan

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/28/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masetti et al (US Patent No. 5,438,566) in view of Karol (US Patent No. 5,416,769).

Regarding claim 1, referring to Figure 7, Masetti discloses a photonic switching device for switching without contention data in the form of optical packets, said device including a space switching matrix (i.e., space switching device 182, Fig. 7) with a plurality of input ports (i.e., e1-e16, Fig. 7) and a plurality of output ports (i.e., s1-s16, Fig. 7) and a unit external (i.e., a buffer 181 and control device 52, Fig. 7) to said space switching matrix (182) including a buffer memory common to all said output ports of said matrix, wherein each of said output ports provides access to said buffer memory (col. 10, lines 9-52).

Masetti differs from claim 1 in that he fails to teach a space switching stage consisting of switches having a 1-to-2 switching function. However, Karol in US Patent No. 5,416,769 teaches a space switching stage (i.e., switches 316, 317, 309, 310, Fig. 3) consisting of switches having a 1-to-2 switching function (col. 5, lines 46-59).

Art Unit: 2633

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the space switching stage consisting of switches having a 1-to-2 switching function as taught by Karol in the system of Masetti. One of ordinary skill in the art would have been motivated to do this since Karol suggests in column 5, lines 46-59 that using such the space switching stage consisting of switches having a 1-to-2 switching function have advantage of allowing the output ports of the optical space switch are a potential point of access the buffer memory.

Regarding claim 2, the combination of Masetti and Karol teaches wherein said buffer memory consists of optical delay lines (Fig. 7 of Masetti and Figs. 1 and 3 of Karol).

Regarding claim 3, it would have been obvious to obtain the 1-to-2 space switching function of each of the output ports of the matrix is implemented by means of optical amplifier switches in order to capture the signal and switch it to the optical buffer memory.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masetti et al (US Patent No. 5,438,566) in view of Karol (US Patent No. 5,416,769) and further in view of Masetti (US Patent No. 5,828,472).

Regarding claim 4, the combination of Masetti and Karol differs from claim 4 in that it does not specifically teach the 1-to-2 space switching function of each of the output ports of the matrix is implemented by means of an opto-electronic switch including a photodiode optical receiver and a light-emitting diode or laser diode optical emitter. However, Masetti in US Patent No. 5,828,472 teaches the output ports of the

Art Unit: 2633

matrix is implemented by means of an opto-electronic switch including a photodiode optical receiver and a light-emitting diode or laser diode optical emitter (Figs. 1 and 2, col. 7, lines 24-40). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the output ports of the matrix is implemented by means of an opto-electronic switch including a photodiode optical receiver and a light-emitting diode or laser diode optical emitter as taught by Masetti in the system of the combination of Masetti and Karol. One of ordinary skill in the art would have been motivated to do this since Masetti suggests in column 7, lines 24-40 that using such the output ports of the matrix is implemented by means of an opto-electronic switch including a photodiode optical receiver and a light-emitting diode or laser diode optical emitter have advantage of allowing capturing the signal and switching it to the optical buffer memory.

Regarding claim 5, Masetti further teaches the buffer memory is an electronic buffer memory (Fig. 7).

Allowable Subject Matter

5. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

BEST AVAILABLE COPY

Art Unit: 2633

With respect to claims 6 and 7, the prior art of record fails to teach a photonic switching device for switching without contention data in the form of optical packets recited in claim 1 which further including a switch unit disposed between said space switching stage and said buffer memory to differentiate traffic intended for extraction and traffic having to enter said buffer memory to be delayed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hong et al (US Patent No. 5,841,556) discloses optical switching system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



Hanh Phan

09/28/2004

BEST AVAILABLE COPY